National Institute of Electronics & Information Technology, Aurangabad
(राष्ट्रीय इलेक्ट्रॉनिकी एवं सूचना प्रौद्योगिकी संस्थान, औरंगाबाद)
Ministry of Electronics & Information Technology
Government of India

COURSE PROSPECTUS

Name of the Group: IT

Name of the Course: AI Development Associate

Course Code: QG-04-IT-00141-2023-V1-NIELIT

Starting Date:18/09/2023 (Tentative)

Duration:570 Hours

Course Coordinator: Mr. Yogesh Kumar, Scientist B, NIELIT Aurangabad

Course Description:

The programme encompasses people's skills, trust, and ability to use technologies responsibly and effectively for broader socio-economic benefits. It has been developed in collaboration with INTEL Technologies India Pvt. Ltd., aiming at Empowering the future workforce with necessary Artificial Intelligence skills for employability in the digital economy.

Course Objectives:

- Gain AI technical confidence: Demystify AI and equip the future workforce with the confidence to learn and apply AI skills independently.
- Enhance employability for AI-related jobs: Build necessary technology, career growth and social skills on AI for jobs ahead
- Entrepreneurship Development.

Moreover, the objectives of this course are aligned to the National Policy on Electronics (NPE) by the Govt of India. Please refer this page: http://meity.gov.in/esdm for more details.

Skills gained by the participants after completing the Course: -

- Technical Skills – Programming and Coding, Data Science, Computer Vision, Natural Language Processing, Algorithmic and Computational Thinking
- Social Skills – AI ethics and bias reduction, critical thinking, problem solving, system mapping and solutions building
- Career Growth Skills – Self management skills like personal management, growth mindset. Entrepreneurial mindset, design & system thinking. Technical confidence and social emotional skills.

Expected Job Roles:

- AI & ML – Jr. Telecom Data Analyst
- AI -Machine learning Developer
- AI & Machine Learning (ML) Engineer

Course Structure:

Sr. No.	Module Title	Duration (Hours)
1	**Implementation of Basic AI Solution using Python programming language and SMART Framework.** • SMART component and tell what each acronym means. • AI project cycle • Orange Data Mining Tool • An introduction to Python programming language • Tableau Public	**30**
2	**Solving use cases using AI models along with building up Entrepreneurial Mindset** • Introduction to Python libraries • AI models to solve various industry applications using Python. • Design Thinking and AI bias • Entrepreneurial Mindset	**60**
3	**Realization of Project in AI domains with understanding of AI Project Pitfalls** • Supervised, Unsupervised, and Reinforcement Learning • Computer Vision, Statistical Data, Natural Language Processing and current applications of the technology • 5 pillars of Social Emotional Skills • AI ethics • Project Pitfalls in relation to the AI project cycle • IoT • Intel's one API library	**150**
4	**Solving of Real time industrial problem statements using AI** • Qualify data from multiple sources • Evaluate data for attributes • Bias and variance • Define and qualify AI models	**30**
9	**Employability Skills** • Introduction to Employability Skills • Career Development & Goal Setting • Becoming a Professional in the 21st Century	**60**

	• Basic English Skills • Communication Skills • Financial and Legal Literacy • Entrepreneurship • Diversity & Inclusion • Constitutional values - Citizenship • Essential Digital Skill	
10	**On Job Training / Implementation of AI project in Virtual Environment**	**240**
Total		**570 Hours**

Other Contents:

I. **Course Fees: Course** fee is Rs 40,000 + GST (* Nil for SC/ST Candidates)
II. **Registration Fee:** An amount of Rs.500/- (including all taxes as applicable) (non-refundable) should be paid at the time of registering for the course.
III. **Course Fee Instalment Structure: -** Can be paid in two instalments
IV. **Eligibility:** B.E./B.Tech. /BSc./MSc.in Electronics/Computer Science/IT/ (All allied branches), MCA/BCA. (Final Year students can also apply)
V. **Number of Seats :30**
VI. **Selection of candidates: The** candidates passed in the qualifying examination will be based on their marks obtained, subject to eligibility and availability of seats.
VII. **Test/Interview (if applicable) :** Not Applicable
VIII. **Counselling/Admission:** 12/09/2023 to 15/09/2023
IX. **Important Dates (if applicable):**

Starting Date for Registration	**10/08/2023**
Last date to submit application form:	**11/09/2023**
Counselling/Admission	**12/09/2023**
Last Date for Payment of Fee	**15/09/2023**
Commencement of class work:	**18/09/2023 (Tentative)**

X. **Course Timings:** 02:00 Hrs to 05:00 Hrs in week days.
XI. **Lab Facilities:** LIST OF EQUIPMENT (For a batch of 30 students)

Sr. NO.	Description	Qty
1	Classroom	2
2	Student Chair	30
3	Student Table	15
4	Smart Interactive Display	2
5	White Board	2
6	Desktop computer with Accessories:	30

	installed with: NumPy Pandas Matplotlib Seaborn Scikit-Learn SciPy Scrapy Selenium PyTorch OpenCV Pyrealsense2 Intel bigdl-nano OpenVINO TensorFlow Keras Plotly Tabulate RSA QtPy, NLTK iPython Imbalanced-learn Graphviz, h5py Gensim, Beautiful soup	

For Registration go to

https://docs.google.com/forms/d/e/1FAIpQLSefGr4ewI0eki_TrG6N54LPhfW4GFTeQEP3R9TmRc10FNShRA/viewform?usp=pp_url

or Scan